Chapter 8
Locative Media and Surveillance at the Boundaries of Informational Territories

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ABSTRACT

This chapter aims to understand new forms of surveillance raised with location-based technologies (LBT) and location-based services (LBS). LBS and LBT are used under the label "locative media". Locative media are media where digital information is bounded to a specific context, and are used for locating, controlling, monitoring and tracking people, places and objects. Here the authors investigate how ubiquitous and pervasive technologies are creating informational territories and digital bubbles or virtual walls that can protect privacy and anonymity of a "sujet insecure", or "insecure individual". To illustrate their goal, the authors will see some systems that use locative media to controling, monitoring and tracking people and objects and some art project showing souveillances or critical actions vis à vis the "control society". They will show informational territories involving surveillance cameras, Bluetooth networks and RFID tags.

INTRODUCTION

Location-based technologies (LBT) and location-based services (LBS) are a product of military research into technologies for locating, controlling, monitoring and tracking people, places and objects. Authors have drawn attention to the dangers of the "Internet of Things" (Kuitenbrouwer, 2006, van Kranenburg, 2008) as personal information can be easily disseminated and/or stored in databases. Ubiquitous computing invades places and transforms everything and everybody into sources of data. Digital footprints emanate invisibly, providing information about the *sujet insécure*, or insecure individual (Rosello, 2008), in the subtlest form of surveillance in our control society (Deleuze, 1992). Pervasive environments create informational territories (LEMOS, 2007) and require digital bubbles (Beslay & Hakala, 2005) or virtual walls (Kapadia et al., 2007) to

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protect privacy. Artists and activists have addressed these questions through the critical use of LBT and LBS. The term locative media was created by them to differentiate their work from commercial projects. The objective of this article is to show how the concepts of the digital bubble and virtual wall prove the existence of informational territories and raise questions related to new (diffuse and invisible) forms of surveillance. To illustrate this we will give examples from life and art involving surveillance cameras, Bluetooth networks and RFID tags.

PRIVACY AND ANONYMITY AMONG LOCATIVE MEDIA

We have entered the era of informational mobility. Location-based services and technologies are expanding with the dissemination of mobile devices (cell phones, smartphones, GPS), wireless computer networks (Wi-Fi, Wi-Max, Bluetooth, GPS) and sensors (mainly RFID) that allow location, surveillance and physical and informational mobility (the ability to consume, produce and distribute information) to be combined for the first time.

Locative media can be defined as the combination of LBS and LBT, such as devices, sensors and digital networks (and the services associated with them) that react to their local context (Kellerman, 2006; Benford, 2005, Benford et. al, 2006; Pope, 2005). The term is an expression created by artists to differentiate their work from commercial projects and to highlight the ambiguities of current issues such as mobility, location, public space and surveillance. The expression was proposed by Karlis Kalnins in 2003, and this terminology has since been used by various authors. One of the pioneers was Russel (1999), who launched a manifesto in which he said that "the internet has already started leaking into the real world".

The mobility offered by ubiquitous networks implies greater informational freedom in urban spaces, but also greater exposure to (subtle and invisible) forms of control, monitoring and surveillance.

A control mechanism that could constantly give the position of an element in an open medium, an animal in a reserve or a man in a company (electronic collar) can be imagined without the need for science fiction. [...] what matters is not the barrier, but the computer that locates each one's position (whether licit or illicit) and operates a universal modulation. (Deleuze, 1992, p. 225).

According to Gow (2005, p.4), "the essential qualities of the ubiquitous network society vision are invisibility and pervasiveness". Invisibility and pervasiveness have been the focus of contemporary debates about locative media and the "Internet of Things"[1], and it is in this area that serious threats to privacy and anonymity arise.

Although they often appear to be synonymous, it is important to distinguish between informational control, monitoring and surveillance so that the problem can be better understood. We consider control to be the supervision of activities, or actions normally associated with government and authority over people, actions and processes. Monitoring can be considered a form of observation to gather information with a view to making projections or constructing scenarios and historical records, i.e., the action of following up and evaluating data. Surveillance, however, can be defined as an act intended to avoid something, as an observation whose purposes are preventive or as behavior that is attentive, cautious or careful. It is interesting to note that in English and French the two words "vigilant" and "surveillance", each of which is spelt the same way and has the same meaning in both languages, are applied to someone who is particularly watchful and to acts associated with legal action or action by the police intended to provide protection against crime, respectively. We shall define surveillance as actions that imply control and monitoring in accordance with